OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **May 9, 2008**

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager
Air Quality Division

THROUGH: Kendal Stegmann, Senior Environmental Manager, Compliance and Enforcement

THROUGH: Richard Kienlen, P.E., Engineering Manager
Phil Martin, P.E., Engineering Section

THROUGH: Peer Review

FROM: Jian Yue, P.E., Engineering Section

SUBJECT: Evaluation of Permit Application No. **98-167-C (M-4) PSD**
Producers Cooperative Oil Mill
6 S.E. 4th Street
Lattitude 35.461° N, Longitude -97.514° W
Oklahoma City, Oklahoma

SECTION I. INTRODUCTION

Producers Cooperative Oil Mill has requested a construction permit to modify the processing mill (SIC code 2074) in Oklahoma City, Oklahoma. This modification is to allow for the processing of multiple oilseeds (in addition to cottonseed and soybeans), including canola, sunflower, peanut, and corn. This modification will involve the physical replacement of the desolventizer toaster (DT) and dryer-cooler (DC), and the cooker. Associated sources include the boilers and material handling equipment. This modification qualifies as a physical change and a change of method in operation, and net emission increase of VOC is expected to exceed the PSD significance level of 40 TPY, therefore, a full PSD review is required.

SECTION II. FACILITY DESCRIPTION

The manufacture of vegetable oil from cottonseed generally involves seed preparation and conditioning, oil extraction, solvent/oil separation, desolventization and treatment of desolventized flakes, and oil refining. Short-cut lint is removed from the clean seeds in a delinting process. The delinted cottonseeds are then hulled to remove the outer seed hulls from the inner seed meats. Solvent extraction is then used to separate the cottonseed oil from the seed meats. Producers uses hexane as the extraction solvent, as do most other commercial continuous edible oil extraction systems. The following paragraphs describe the changes in operations at the mill that will occur in

order to process other oilseeds. None of the other seeds will be processed simultaneously with cottonseed or each other.

Raw Seed Receiving and Storage

The mill currently receives most of the cottonseed it processes by truck. Each truck is weighed by on-site scales before being sent to one of two seed dump stations. The trucks are unloaded at the seed dumps by being elevated to a 45-degree angle. The seed is released from the rear of the truck and falls into a hopper. From the hoppers, the seeds are transported by screw conveyors to elevators that direct the seeds to the various storage houses.

Producers will receive the majority of the other oilseeds it processes by truck as well, using the same dump stations, conveyors, and storage houses. The only major difference is that the daily production rate of other oilseeds is 800 tons per day versus 1,200 tons per day of cottonseeds. Therefore, emissions from handling other oilseeds should be less than cottonseed because less material will be processed by the facility.

Seed Preparation/Cleaning Room

When the mill currently cleans cottonseed, the seed is sent through a series of seed cleaners. The seed cleaners separate debris larger and smaller than seed size by a series of screens. By using air and gravity, rocks, nuts, twigs, and other materials that are seed size also drop out. The cleaned seed is then mechanically conveyed to a holding tank before delinting. Dirt and debris are collected and loaded outside the cleaning room in trash bins. The air streams for each cleaning unit are ducted to one of 17 cyclone systems. The mill will continue to use equipment in the cleaning room to mechanically clean and crack the other oilseeds, but the process rate will be reduced from 1,200 tons per day to 800 tons per day.

Delinting and Hulling

After cleaning, the seed is mechanically conveyed to the Lint Room where first, second, and third-cut saw type delinters are used to remove lint from the seed. Clean lint is pneumatically conveyed through piping to the Baling Room for pressing. In the Separations Room, the black seed is processed through a series of hullers that cut the seeds open to release the meats. Air streams used on equipment in the Lint Room are directed to cyclone systems that separate and recycle lint and solids back into the process. Exhaust streams from the cyclones are ducted to one of three drum filters for secondary particulate control. Three cyclone systems in the Lint Room are not tied to the drum filter system and are separate emission points. In the baling room, emissions will be routed to a new filtration system being installed inside the baling room department, and the air will no longer be emitted to the outside environment.

The mill will not use the delinters or hullers when processing other oilseeds, so PM emissions will be reduced.

Other Seeds Preparation

When processing other oilseeds, the facility will feed the seed into a new pre-cleaning shaker and cracking mill that will split the seed into several pieces. The cracked seeds will then pass through aspirators to remove the hulls (processed separately). The shaker and cracking mill will be added to the prep room, but the exhaust will vent internally.

The cracked seeds are then conditioned in a stacked cooker to make them pliable for flaking. Finally, the conditioned seeds are conveyed and fed to smooth, cylindrical rolls that press the particles into smooth flakes, which vary in thickness from approximately 0.25 to 0.51 millimeters. Flaking allows the seed oil cells to be exposed and the oil to be more easily extracted. Producers will add a new cracking mill and cooker to accommodate other oilseeds.

Oil Extraction

Solvent extraction with hexane is used to recover oil from the seeds. The flaked seed meats are subjected to dilute miscella (a solution of oil and hexane) to wash oil from the flaked seed. After several steps, the flaked seed meats are given a fresh hexane rinse. The flaked seeds are then drained before moving to the desolventizer toaster dryer cooler (DT/DC) unit. Producers will install a new DT/DC with additional trays to accommodate processing other oilseeds.

In the desolventizer toaster portion of the unit, the flaked seeds are contacted with sparge steam. This drives hexane from the meat to leave meal. The meal is then processed in the dryer cooler part of the unit. First the meal is contacted with hot air streams to remove any remaining hexane from the meal. A cooled air stream is then passed over the meal to cool it. Meal picked up by the air streams is recovered in a cyclone and is recycled back in to the DT/DC.

The hexane laden vapors from the DT/DC unit, the first and second stage evaporators, the stripper, and the oil dryer are collected, condensed, and decanted. The DT/DC condenser handles vapors from the DT/DC unit. The vent evaporator condenser pulls vapors from all other units. Hexane and water removed from the vapor streams in the condensers are sent to a work tank. Decanted hexane from the work tank is recycled into the process. The hexane remaining in the exhaust gas from the condensers is controlled with a mineral oil scrubbing system (EP04). A mineral oil absorber is first used to remove hexane from the exhaust gases prior to release to the atmosphere. The hexane laden mineral oil then travels through a mineral oil heater and stripper in which the hexane is removed by injection with live steam. The concentrated hexane vapor is returned to the vent evaporator condenser.

Fugitive vapors that collect inside the extraction plant building due to releases from process equipment, leaks from valves and flanges, and other fugitive type losses, are drawn into floor sweeps and are exhausted out a single stack (EP03).

The Extraction Plant is enclosed. It is estimated that 56% of the hexane lost to the atmosphere is emitted through the floor sweep stack (EP03). Twenty percent of the hexane released to the

atmosphere is attributable to the condenser/scrubber system (EP04). The remaining 24% of hexane losses are attributed to the DT/DC exhaust (EP05).

Solvent/Oil Separation

After extraction, the solvent is separated from the oil by distillation. The miscella leaves the extractor at an oil/hexane concentration of approximately 30% oil/70% hexane. It is fist pumped through the first stage evaporator, which is heated with hot exhaust gases from the DT/DC unit. From the first stage evaporator, the oil/hexane concentration is reversed resulting in a 70% oil/30% hexane mixture. The miscella is then pumped to the miscella tanks where it is kept until it can be refined.

The miscella is next treated in a refiner where it is dosed with a caustic solution (typically sodium hydroxide). This action begins the separation of the heavy soaps from the light oil, which is carried out in a centrifugal separator. At this point, the light oil is processed through the second stage evaporator which removes more hexane. For final hexane removal, the oil then passes through a stripper containing a dish/donut type scrubber media as live steam is injected in a counter-current flow. The oil, now stripped of hexane, is then pumped to an oil dryer, also containing dish/donut type media, which uses a counter-current hot air flow (indirectly heated by steam) to remove water from the oil. The oil is then pumped to finished oil tanks prior to shipment.

Meal Processing and Loadout

From the DT/DC unit at the extraction plant, meal is pneumatically conveyed to a large receiving cyclone (MF01), which separates the meal from the pneumatic stream. The meal is then stored in one of five meal tanks. The meal is then transported to one of two loadout points at either the meal room or the meal storage house. In the meal room, meal can be directly loaded from conveyors into open top trucks via front-end loaders. The loading operations at both the primary meal loadout stations off the meal room, and the meal storage house are a source of fugitive dust emissions.

The hexane storage tank at the extraction plant is not represented as an emission unit because its breathing vent is ducted back into the vent/condenser system.

SECTION III. EQUIPMENT

Emission units (EUs) have been arranged into Emission Unit Groups (EUGs) in the following outline.

EUG 1. Cleaning Room Cyclones

EU ID#	Name/Model	Installed Date
CR01	Lint Fan Cyclone	6/10/94
CR02	Interoll 10 Cyclone	8/15/91
CR03	Interoll 9 Cyclone	8/15/91
CR04A	Interoll 8 Cyclone	9/22/86
CR04B	Interoll 8 Cyclone	9/22/86
CR05A	Interoll 7 Cyclone	9/22/86
CR05B	Interoll 7 Cyclone	9/22/86
CR06A	Interoll 6 Cyclone	9/22/86
CR06B	Interoll 6 Cyclone	9/22/86
CR07A	Interoll 5 Cyclone	9/22/86
CR07B	Interoll 5 Cyclone	9/22/86
CR08A	Interoll 4 Cyclone	9/22/86
CR08B	Interoll 4Cyclone	9/22/86
CR09A	Interoll 3 Cyclone	9/22/86
CR09B	Interoll 3 Cyclone	9/22/86
CR10A	Interoll 2 Cyclone	9/22/86
CR10B	Interoll 2 Cyclone	9/22/86
CR11	Interoll 1 Cyclone	8/15/91
CR12	Seed & Rock Fan Cyclone	6/10/94
CR13	Robbing Fan Cyclone	6/10/94
CR14	Fly lint Fan Cyclone	6/10/94
CR15	Motes Fan Cyclone	6/10/94
CR16	Grabbots Fan Cyclone	6/10/94
CR17	Trash Fan Cyclone	6/10/94

EUG 2. Lint Room Cyclones

EU ID#	Name/Model	Installation Date
LR04	Lint Fan Cyclone	6/10/94
LR05	Lites Fan Cyclone	6/10/94
LR06	Trash Blower Cyclone	6/10/94

EUG 3. Lint Room Drum Filters

EU ID#	Name/Model	Installation Date
LR01	Lint Room Filter #1	1/1/90
LR02	Lint Room Filter #2	1/1/90
LR03	Lint Room Filter #3	1/1/90

EUG 4. Separation Room Filter

EU ID#	Name/Model	Installation Date
SR01	Separation Room Drum Filter	7/1/94

EUG 5. Preparation Room Vents

EU ID#	Name/Model	Installation Date
Prep Room Vents	Shaker	To Be Determined
	Cracking Mill	To Be Determined

This emission group was originally designated for the baling room cyclones in the original Title V operating permit. However, emissions from the baling room are now routed to a new filtration system inside the baling room department, and the air is no longer emitted to the outside environment.

EUG 6. Extraction Plant

EU ID#	Name/Model	Installation Date
EP03	Extraction Plant Floor Sweep	1/1/68
EP04	Scrubber Exhaust Vent	6/1/96
EP05	Meal/Dryer/Cooler	2008

EUG 7. Seed House Cooling Fans
There are twenty six fans.

EUG 8. Boilers

EU ID#	Make/Model	MMBtu/hr	Serial #	Installed Date
Boiler01	Cleaver Brooks Boiler	29.4	Ol094289	7/1/2001
Boiler02	ABCO-Scotch Boiler	25.20	79124-600	10/1/85

EUG 9. Receiving Operations
The maximum short-term dump/unloading rate from all truck dumps and railcar unloading is 257.6 ton/hr.

EUG 10. Seed Storage

EUG 11. Loadout Operations
The maximum short term loading rate is 250 ton/hr.

EUG 12. Hexane Storage tank (19,700 gallons)
The emissions from the hexane tank are vented to the process stream, which includes a vapor recovery system.

EUG 13. Meal Clay Tank Bag House

SECTION IV. PSD NETTING

The facility has a potential to emit 336 TPY of hexane and is considered an existing PSD facility. This proposed project is considered a physical change and a change in method of operation and involves both new equipment (DT/DC, a cooker, a pre-cleaning shaker, and a cracking mill) and

changes in emissions from unmodified associated units. Therefore, PSD applicability will be based on actual-to-potential test for new equipment and actual-to-projected-actual test for existing units, including all contemporaneous emission increases and decreases.

Past Actual Emissions

The applicant used year 2005 and year 2006 emission inventory to represent past actual emissions as listed in the following table.

	PM_{10} TPY	**VOC TPY**	**CO TPY**	**NOx TPY**	**SO_2 TPY**
2005 Reported emissions	179.53	161.71	6.32	7.53	0.05
2006 Reported Emissions	152.56	79.67	5.89	7.01	0.04
Baseline Actual Emissions	**166.04**	**120.69**	**6.11**	**7.27**	**0.04**

Future Potential Emissions

Emission increase calculation is based on actual-to-potential test for new equipment. Proposed new equipment includes a new desolventizer toaster dryer cooler (DT/DC) unit in oil extraction and a new shaker, a cracking mill, and a cooker in preparation room.

Extraction Plant (DT/DC)

The following table lists maximum process rate and hexane usage for each oil seed.

Oil Seeds	**Process Rate**		**Hexane Usage**
	Ton/day	**Ton/year**	**Gal/ton seed**
Cotton Seed	1,200	300,000	0.4
Canola	800	96,000	0.7
Sunflower	800	96,000	0.4
Peanut	800	96,000	1.2
Soybean	800	96,000	0.15
Corn Germ	800	96,000	0.7

The following table lists hexane emissions from processing 100% one type of oil seed based on hexane density of 5.6 lb/gal.

Oil Seeds	Hexane Emissions (TPY)
Cotton Seed	336
Canola	188.16
Sunflower	107.52
Peanut	322.56
Soybean	40.32
Corn Germ	188.16

The following table lists hexane emissions from processing a mixture of oil seeds under possible scenarios.

Oil Seeds Mixture Scenarios	Hexane Emissions (TPY)
Scenario A: 50% Cottonseed & 50% Canola	262.08
Scenario B: 50% Cottonseed, 25% Canola, and 25% Peanut	295.68
Scenario C: 33% Cottonseed, 33% Canola, and 33% Peanut	282.24
Scenario D: 25% cottonseed, 25% Canola, 25% Peanut, and 25% Sunflower	238.56
Scenario E: 50% Cottonseed and 50% Peanut	329.28

Highest hexane emissions come from processing 100% cottonseed and will be used as future potential emissions for the extraction plant.

Preparation Room (Pre-Cleaning Shaker and Cracking Mill)

The shaker and cracking mill will vent inside the prep room and Producer considered that the building would have similar control efficiency of a cyclone. Emissions from the prep room are based on AP-42 (11/95), Table 9.11.1-1 (0.36 lb/ton for cracking/dehulling with cyclone) and an annual process rate of 300,000 TPY.

Source	PM_{10} Emission Factor lb/ton	PM_{10} Emissions TPY
Prep Room (Cracking)	0.36	54

Projected Future Actual Emissions

Emission increase calculation is based on actual-to-projected-actual for existing equipment. Associated emission sources include oil seed receiving, cleaning, drying, transfer, storage, preparation, extraction, meal processing, and steam production (boilers). Except for boilers, when processing oil seeds other than cottonseed, these sources remain in the same operation with lower processing rate and delinting operation will not be used. The current permit limits the

combined boilers to continuous emissions from the larger boiler. Projected emissions will be based on both boilers to operate continuously.

Per 252:100-8-31, under the definition of projected actual emissions, "In determining the projected actual emissions, the owner or operator of the major stationary source shall exclude, in calculating any increase in emissions that results from the particular project, the portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive 24-month period used to establish the baseline actual emissions and that are also unrelated to the particular project, including any increased utilization due to product demand growth." Producers will not utilize the delinting operation while operating the new pre-cleaning shaker and cracking mill. When processing cottonseed, the process rate will be the same as allowed in the current permit. Therefore, emission increase calculation from the delinting operation is excluded from the netting analysis.

Projected actual PM_{10} emissions from other affected existing sources are based on potential emissions permitted in the current permit.

The following table lists projected PM_{10} emissions from new and existing sources.

Sources	**PM_{10} Emissions TPY**
Cleaning Room Cyclones	79.1
Cracking/Dehulling	54
Extraction Plant	11.6
Seed House Cooling Fans	7.8
Boilers	1.82
Receiving Operations	8.85
Seed Storage	5.1
Loadout Operations	2.18
Meal Clay Tank Bag House	0.06
Total	170.51

The following table lists potential emissions from boilers:

Source	**PM_{10}**	**VOC**	**CO**	**NOx**	**SO_2**
Boilers	1.82	1.32	20.09	23.91	0.14

The following table lists a summary of actual and projected emissions:

Year	PM_{10} TPY	VOC* TPY	CO TPY	NOx TPY	SO_2 TPY
2005 Reported emissions	179.53	161.71	6.32	7.53	0.05
2006 Reported Emissions	152.56	79.67	5.89	7.01	0.04
Baseline Actual Emissions	**166.04**	**120.69**	**6.11**	**7.27**	**0.04**
Projected Potential/Actual	170.51	337.32	20.09	23.91	0.14
Emission Increases	4.47	216.63	13.98	10.617	0.1
PSD Significant Level	**15**	**40**	**100**	**40**	**40**
PSD Applicability	**No**	**Yes**	**No**	**No**	**No**

*including hexane.

This modification is subject to PSD review for VOC.

SECTION IV. EMISSIONS

This section describes emissions from processing cottonseeds. Emissions from processing other oil seeds would be less, due to less seed processing rate.

Potential emissions for most of the sources at this facility are based on the processing rate of seeds. The maximum processing rate is 300,000 tons per year of seed. Daily maximum processing rate is 1,200 tons per day of seed. Plant operations will be 8,760 hours per year. However, the plant may experience normal down-time for maintenance activities, or may halt some operations at the end of each processing season (in June or July). Therefore, the emissions rates from some emissions units are based on an annual throughput factor, representing the ratio of expected annual average production to maximum annual average production. The annual throughput factor is calculated to be 0.92.

Emissions Factors

Permit No. 98-167-TV(M-2) (issued on11/13/2006) required the applicant to conduct Method 5 stack test for representative emission points to demonstrate compliance within 365 days of the issuance of the permit. The applicant conducted the test on December 5 through 13, 2006 and submitted the test report on March 6, 2007. The following table lists the testing result.

Tested Emission Point	Tested PM_{10} Emissions	
	gr/dscr	**lb/hr**
CR01, Lint Fan Cyclone	0.0029	0.05
CR02, Interoll 10 Cyclone	0.0022	0.05
CR06A, Interoll 6 Cyclone A	0.0032	0.03
CR08A, Interoll 4 Cyclone A	0.0044	0.03
CR14, Fly Lint Fan Cyclone	0.006	0.33
CR16, Grabbots Fan Cyclone	0.0146	0.22
LR05, Lites Fan Cyclone	0.0021	0.02
LR01, Lint Room Filter #1	0.0012	0.63
LR02, Lint Room Filter #2	0.0013	0.72
LR03, Lint Room Filter #3	0.0017	0.93
SR01, Separation Room Filter #1	0.002	1.09
EUG8A, Seed House 3A Fan	0.001	0.05
EUG8B, Seed House 3B Fan	0.0004	0.02

Tested emission factors are much lower than factors used in previous permits and the applicant will keep emission factors used in previous permits in place.

Emissions

Since processing cotton seeds at maximum capacity produce highest emissions, emission calculation addressed in the following section will be based on cotton seed processing except for the preparation room vents.

1. Cyclone Systems

Cyclones are an integral part of the production processes at cottonseed mills. They are used to recapture the particulates generated during processing. Since most production processes at a cottonseed mill involve a mechanical action on the seeds (e.g. cleaning, delinting, hulling, beating), particulate matter emissions are generated at each stage of the production process.

In the original Title V application, the applicant used an emission factor of 0.03 grains per standard cubic foot (gr/scf) in AP-42 (2/80), Section 10.4, Woodworking Waste Collection Operations, to estimate the potential emissions from the cyclones handling seeds, lint hulls, or meal. Based on the grain loading factor, the PM_{10} hourly emission rate for a given cyclone was calculated using the following equation:

PM_{10} (lb/hr)=(0.03 gr/hr)(Q acfm)(T_s ^oR/T_a ^oR)(lb/7000 gr)(60 min/hr)

Where Q is the actual flow rate exiting the cyclone, T_s is the standard temperature (assumed to be 68 ^oF or 528 ^oR), and Ta is the actual exhaust gas temperature.

The PM_{10} annual emission rate is calculated from the hourly emission rate using an annual throughput factor of 0.92, which represents the ratio of expected annual average production to maximum annual average production.

2. Drum Filter Systems

The majority of cyclones in the lint Room and Separations Room are ducted to drum filter systems for secondary particulate control. Emissions from the drum filters are calculated using an estimated outlet grain loading per exit volume, as well as an annual throughput factor of 0.92. Typical published factors for fabric filters serving grain milling and grain loadout operations range from 0.005 to 0.01 gr/scf (Air & Waste Management Association, Air Pollution Engineering Manual, Van Norstrand Reinhold, New York, 1992). Producer used 0.01 gr/scf to calculate emissions from drum filter systems.

3. Extraction Plant

The largest source of hexane vapors in solvent extraction plants are from the DT/DC unit where hexane is removed from the meal, and from the evaporators and stripper, where hexane is separated from the oil. Hexane vapor streams are controlled through a condenser system operating in series with a mineral oil scrubber. The Extraction Plant is enclosed and hexane vapors, which are slightly heavier than air, sink inside the building. The vapors are collected in floor sweeps that duct them to a single stack (EP03). It is estimated that 56% of the hexane lost to the atmosphere is emitted through this floor sweep stack. Twenty percent of the hexane released to the atmosphere is attributable to the condenser/scrubber system (EP04). The remaining 24% of hexane losses are attributed to the DT/DC exhaust (EP05). It is assumed that solvent used in extraction is 100% hexane. The hexane loss of 0.4 gal/(ton seed) for processing cotton seed, and a density of 5.6 lb/gal are used to estimate the hexane emissions for processing cotton seed.

4. Other Operations

The shaker and cracking mill will vent inside the prep room and Producer considered that the building would have similar control efficiency of a cyclone. Emissions from the prep room are based on AP-42 (11/95), Table 9.11.1-1 (0.36 lb/ton for cracking/dehulling with cyclone) and an annual process rate of 300,000 TPY.

Source	**PM_{10} Emission Factor lb/ton**	**PM_{10} Emissions TPY**
Prep Room (Cracking)	0.36	54

Emissions due to seed receiving operations are estimated based on hourly receiving rates for each seed dump and the total annual gray seed processing rate, and a PM_{10} emission factor of 0.059 lb/ton in AP-42 (03/03), Table 9.9.1-1. The seed dumps are below-ground chambers, no capture factor is applied to calculate fugitive emissions for these sources. Seed houses are closed except for

roof vents, therefore a 50% capture factor is applied for fugitive emissions. Since feed tanks have only one small vent each, a 90% capture factor is used.

When gray cottonseeds or other seed product materials are conveyed and dropped into the storage houses or seed piles, fugitive emissions can be generated as particulate matter entrained in the air that is displaced by the seed escapes out the storage house vents. These fugitive emissions are calculated based on the maximum seed processing rates and a PM_{10} emission factor of 0.034 lb/ton seed in AP-42 (03/03), Table 9.9.1-1.

Raw cottonseeds stored in seed houses need to be maintained at cool temperatures in order to prevent decomposition. Thus, each seed house has a system of cooling fans that draws ambient air through the interior of the seed piles for cooling. These cooling fans operate approximately 5 months per year during the late fall, winter, and early spring when the humidity is low and ambient temperatures are cooler than the seed piles. During this time, raw seed inventories are highest since the majority of seeds processed throughout the year are delivered to the facility after the cotton harvest in the fall. At each seed house, blowers located outside the piles at either end provide the vacuum necessary to draw ambient air through the piles. Some lint and dust particles become entrained in the air flowing through the piles and are then exhausted out of the fans. To account for these emissions, the seed piles are assumed to act on the air much like a large, highly efficient baghouse. Except for a short period when a set of fans is first turned on, the cooling fan system does as much to filter ambient air as it does to emit particulates. The applicant applied a 0.001 gr./scf emission factor, as an engineering estimate, to the air stream pulled through the piles to estimate the emissions from the fans. This permit will require the applicant to conduct Method 5 stack test for these cyclones within 365 days of the issuance of this permit.

Loadout operations of meal and hulls are accomplished by the drop loading of products into trucks or rail cars. Fugitive emissions calculations are based on the grain shipping factor from AP-42 (03/03), Table 9.9.1-1. A 50% capture factor is also applied to account for the fact that loading is performed inside sheds or houses, or from elevated storage bins with tarps to control fugitive dust.

Emissions from two natural gas-fired boilers are estimated based on AP-42 (7/98), Tables 1.4-1 and 1.4-2, and reflect continuous operation.

Total Emissions

Source	PM_{10}		VOC*		NO_x		CO		SO_2	
	lb/hr	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
Cleaning Room Cyclones	19.53	79.1								
Lint Room Cyclones	1.70	6.8								
Lint Room Drum Filters	16.76	67.5								
Separation Room Filter	5.37	21.6								
Cracking/Dehulling	12	54								
Extraction Plant	2.87	11.6	112.0	336.0						
Seed House Cooling Fans	1.56	7.8								
Boilers	0.41	1.82	0.30	1.32	5.46	23.91	4.59	20.09	0.03	0.14
Receiving Operations	15.20	8.85								
Seed Storage	1.7	5.1								
Loadout Operations	7.25	2.18								
Meal Clay Tank Bag House	0.34	0.06								
Total	**72.69**	**212.41#**	**112.30**	**337.32**	**5.46**	**23.91**	**4.59**	**20.09**	**0.03**	**0.14**

*including hexane

#Total PM_{10} emissions do not include emissions from cracking/dehulling, since it does not operate simultaneously with the delinting operations including lint room and separation room, and delinting operations have higher emissions.

Emissions of Hazardous Air Pollutants (HAPs)

HAPs Emissions from the Extraction

Pollutant	Potential	
	lb/hr	**TPY**
Hexane	112.0	336.0

This facility is a major source for HAPs.

SECTION V. PSD REVIEW

The new DT/DC has been reviewed for all applicable air pollution control rules and regulations including Prevention of Significant Deterioration. Full PSD review of emissions consists of the following:

- determination of best available control technology (BACT);
- evaluation of existing air quality and determination of monitoring requirements;
- evaluation of PSD increment consumption;
- analysis of compliance with National Ambient Air Quality Standards (NAAQS);
- evaluation of source-related impacts on growth, soils, vegetation, visibility;
- and evaluation of Class I area impacts.

Best Available Control Technology

Any major stationary source or major modification subject to federal PSD review must conduct an analysis to ensure the implementation of BACT. The requirement to conduct a BACT analysis can be found in the Clean Air Act itself, in the federal regulations implementing the PSD program, in the regulations governing federal approval of state PSD programs, and in Oklahoma regulations. The State of Oklahoma defines BACT in OAC 252:100-8-1.1, as follows:

"...the control technology to be applied for a major source or modification is the best that is available as determined by the Director on a case-by-case basis taking into account energy, environmental, and economic impacts and other costs of alternate control systems."

The BACT requirement applies to each individual new or modified affected emissions unit and pollutant emitting activity at which a net emissions increase would occur. Individual BACT determinations are performed for each pollutant subject to a PSD review emitted from the same emission unit. Consequently, the BACT determination must separately address, for each regulated pollutant with a significant emissions increase at the source, air pollution controls for each emissions unit or pollutant emitting activity subject to review. In this permit, only VOC emissions from the DT/DC of extraction plant is subjected to BACT determination.

In a memorandum dated December 1, 1987, U.S. EPA stated its preference for a "top-down" analysis (U.S. EPA, Office of Air and Radiation, Memorandum from J.C. Potter to the Regional Administrators. Washington, D.C. December 1, 1987). After determining whether any NSPS is applicable, the first step in this approach is to determine for the emissions unit in question, the most stringent control available for a similar or identical source or source category. If it can be shown that this level of control is technically or economically infeasible for the unit in question, the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic concerns. The five basic steps of a top-down BACT review procedure as identified by U.S. EPA in the March 15, 1990, Draft BACT Guidelines are as follows (U.S. EPA, Draft BACT Guidelines. (Research Triangle Park, NC). March 15, 1990):

Step 1. Identify all control technologies
Step 2. Eliminate technically infeasible options
Step 3. Rank remaining control technologies by control effectiveness
Step 4. Evaluate most effective controls and document results
Step 5. Select BACT

U.S. EPA has consistently interpreted statutory and regulatory BACT definitions as containing two core requirements that the agency believes must be met by any BACT determination, regardless of whether it is conducted in a "top-down" manner. First, the BACT analysis must include consideration of the most stringent available control technologies (i.e., those which provide the "maximum degree of emissions reduction"). Second, any decision to require a lesser degree of emissions reduction must be justified by an objective analysis of "energy,

environmental, and economic impacts (U.S. EPA, Office of Air and Radiation, Memorandum from J.C. Potter to the Regional Administrators. Washington, D.C. December 1, 1987)".

Potentially applicable emission control technologies were identified by researching the U.S. EPA control technology database, technical literature, and control equipment vendor information and by using process knowledge and engineering experience. The Reasonably Available Control Technology (RACT)/BACT/Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC), a database made available to the public through the U.S. EPA's Office of Air Quality Planning and Standards (OAQPS) Technology Transfer Network (TTN), lists technologies that have been approved in PSD permits as BACT for numerous types of process units.

BACT Analysis for VOC from DT/DC of the Extraction Plant

1. Identify All Control Technologies

The potential control technologies identified for the post-condenser/absorber VOC emissions and VOC emissions from the meal dryer/cooler are presented in the following table. These technologies were obtained from the U.S. EPA's RBLC, surveying regulatory agencies, and researching recently issued similar permits. No add-on control technologies were identified in the RBLC for dryer/cooler exhaust vents. Further, even though a condenser/absorber train is identified in the RBLC as BACT for multiple permitted oilseed extraction processes, it is recognized throughout the industry that these units are intended for solvent recovery. They are not considered control devices, as the control of VOC emissions is a secondary function.

Potential Control Technologies for VOC Emissions

VOC Control Technologies from RBLC
Regenerative Thermal Oxidizer (RTO) or Equivalent Incineration
Carbon Adsorption
Biofilter
Best Management Practices

Commercially available RTOs or catalytic incinerators can achieve VOC destruction efficiencies that exceed 99% depending on the particular installation. Commercially available carbon adsorption systems can achieve 95%-99% control efficiency. A biofilter is vulnerable to changes in the inlet gas stream composition or changes in the physical operating conditions of the system, which can lead to wide fluctuations in the destruction efficiency provided by the system.

2. Eliminate Technically Infeasible Options

RTO/Incineration

RTOs and incineration systems can not be used to control VOC emissions in oilseed oil extracting facilities for both technical and safety reasons.

First, the exhaust from the mineral oil absorber will include small amounts of oil in aerosol form. The aerosol oil is likely to cause carbonization and degradation of packing in an RTO leading to a loss of heat transfer. Degrading the packing and losing heat transfer will make the RTO less effective. Therefore, an RTO on the outlet of the mineral oil absorber to control VOC emissions is technically infeasible.

Second, the exhaust from the meal dryer/cooler will include PM10. The packing material and the inlet screen in the regeneration system of an RTO are susceptible to plugging by particulate matter. The plugging will cause the RTO to malfunction. Therefore, a RTO to control VOC emissions for the meal dryer/cooler is technically infeasible.

In addition to the technical problems associated with a RTO, RTOs and incinerating are not feasible for safety reasons. The national Fire Protection Agency (NFPA) standards for solvent extraction plants require that any flame operations, such as RTOs, be located at least 100 feet from the process area. These standards also require potential ignition sources be equipped with approved devices to prevent flashbacks into the process area. The inherent presence of fugitive hexane vapors at the plant and the presence of an open flame from a RTO present an unacceptable risk of explosion and fire hazard.

In addition to fugitive hexane vapors, variations in flow and solvent concentrations during normal operation, normal shutdown procedures, process upsets, and malfuctions may result in near Lower Explosive Limit (LEL) conditions in the vent exhaust and increase the risk of explosion.

Furthermore, no applications of this type at solvent extraction plants have been demonstrated. For these reasons, RTO/incineration are technically infeasile and do not warrant further consideration as BACT for either the mineral oil absorber or the dryer/cooler vents.

Carbon Adsorption

Carbon adsorption is not used to control VOC emissions in oilseed oil extraction facilities for technical and safety reasons. Carbon adsorption systems were applied rather widely to the final vent stream from solvent extraction plants in the late 1940s and early 1950s. In the late 1950s, mineral oil absorption systems began to replace carbon units. The technical issues for carbon adsorption are much the same as the RTO/incineration units. The aerosol oil in the mineral oil absorber exhaust and the PM10 in the meal dryer/cooler exhaust causes fouling of the carbon bed. Also, oilseeds naturally contain small amounts of sulfur compounds, which also cause fouling of the carbon bed. Although the PM_{10} concentration in the meal dryer/cooler exhaust can be reduced by a high efficiency filtration system, the aerosol oils and sulfur compounds cannot be similarly removed.

In addition, the adsorption of hexane onto carbon is an exothermic reaction. Increases in the concentration of the inlet stream will cause additional heat to build up in the carbon bed. Under optimum conditions, the air movement through the bed will remove the heat via convection. However, if channeling occurs in the carbon bed, or if the increase in concentration is too large

(as in an upset condition), the bed can over heat to the point of auto-ignition. Good design and control can eliminate overheating of the carbon bed, but during an upset or when the equipment or controls fail, overheating will result. This makes the carbon adsorbers a potential source of ignition.

Although an adsorber vessel would usually contain fires resulting from overheating, the vessel is directly connected to the process by duct work, which allows a flame path back to the process. The highest probability of a fire to occur in the adsorber is during process upsets when solvent vapor fills the duct connecting the process to the adsorber. A flame front could flow back into the process from the adsorber creating a fire and explosion hazard. The inherent presence of fugitive hexane vapors at the plant could also lead to catastrophic results. This creates an unacceptable risk of explosion.

Because of these technical and safety concerns, carbon adsorption is technically infeasible and is eliminated from further consideration as BACT for both the mineral oil absorber and the meal dryer/cooler.

Biofilter

The application of the biofiltration technology outside of the bench-scale and pilot plant operations has been limited. There is no methodology or theory established to design for or predict the destruction efficiency that could be achieved f9or Producer's proposed new oilseed plant. A biofilter system is dynamic since the system continually changes with changes in the microbial growths it contains. Knowledge of the behavior of these dynamic systems over extended operating periods is not available. Thus there is no basis form which the long-term reliability of the system could be established.

At this stage in its development, the application of biofiltration for control of the hexane in the mineral oil absorber and meal dryer/cooler exhaust streams would be technically infeasible, primarily due to the large gas flow rate to be treated. Destruction efficiencies in biofilter systems are largely governed by gas residence time in the biofilter bed and the degradability of the contaminant to be treated. Hexane does have a relatively high degree of biodegradability. However, the bed volume required to provide even a five second residence time, the minimum residence time that may be suitable, would be prohibitively large. Since biofiltration is not a technically proven control for hexane emissions from solvent extraction plants, this technology is eliminated from further consideration.

3. Rank Remaining Control Technologies by Control Effectiveness

Best management practices designed to minimize VOC emissions constitute the only technically feasible control options for the mineral oil absorber and the meal dryer/cooler.

4. Evaluate Most Effective Controls and Document Results

Mineral oil absorbers ae commonly used in oilseed extraction facilities for final recovery of solvent vapors from the final condenser. While many oilseed plants use mineral oil absorbers (and in many cases the absorbers are referred to as control devices even though their primary function is solvent recovery), no existing facility has been identified that controls VOC emissions using add-on control devices at the outlet of the mineral oil absorber. Further, no facility has been identified that controls VOC emissions using add-on control devices for the meal dryer/coolers.

Other facilities do have permitted maximum solvent loss rates and a requirement to minimize solvent losses using best management practices.

5. Select BACT

Best management practices along with various plant-wide solvent loss limits (ingallons of solvent loss per ton of seed processed) are considered BACT for both the mineral oil absorber and the meal dryer/coolers. The following table summarizes these BACT determinations. The proposed VOC BACT limits for soybean use were determined based on a review of the emission limits issued to similar facilities in recent PSDs. No specific best management practices are proposed. Compliance with best management practices will be determined by meeting the solvent loss limit.

BACT Determinations	Oil Seeds	Proposed BACT Limit gal/ton
Best Management Practices	Cottonseed	0.4
	Soybean	0.15
	Canola	0.7
	Sunflower	0.4
	Peanut	1.2
	Corn	0.7

Air Quality Impacts

Prevention of Significant Deterioration (PSD) is a construction permitting program designed to ensure air quality does not degrade beyond the National Ambient Air Quality Standards (NAAQS) or beyond specified incremental amounts above a prescribed baseline level. The PSD rules set forth a review procedure to determine whether a source will cause or contribute to a violation of the NAAQS or maximum increment consumption levels. If a source has the potential to emit a pollutant above the PSD significance levels then they trigger this review process. VOC is the only pollutant subject to PSD review for this permit application. With a proposed emission increase of 217 TPY of VOC, an ambient impact analysis including pre-application monitoring data is required.

Significant Impacts Determination

The DEQ routinely conducts screening evaluations for facilities emitting ozone precursors. These impact evaluations are conducted with the Comprehensive Air Quality Model with extensions (CAMx) and use existing photochemical modeling databases that rely upon actual and projected future actual emissions rather than potential emissions. When analyzing the impact of emission increases, past actual emissions from the facility, contained within the existing database, are replaced with future potential emissions rather than projected future actual emissions. This is as consistent with the treatment of other criteria pollutant PSD evaluations as is possible with readily available data sets. However, given the nature of photochemical modeling datasets and in the absence of EPA guidance, an evaluation of impacts based on future actual emissions, when known, is a reasonable consideration for a case by case determination. In this specific situation, the facility in question is replacing equipment and does not plan to increase potential emissions though the comparison of past actual to future potential does require PSD review. Further the future actual emissions are not expected to increase significantly above present actual emissions. As the facility modification does not result in an actual or potential increase in emissions, current ozone concentrations should not be further impacted by the modification and therefore no additional analyses are necessary. The recommended evaluation methodologies for other criteria pollutants are well documented and under no circumstance may this argument be applied to any other criteria pollutant.

Pre-Application Monitoring

Pre-construction monitoring for ozone is required for any new source or modified existing source located in an unclassified or attainment area with greater than 100 tons per year of VOC emissions. Continuous ozone monitoring data must be used to establish existing air quality concentrations in the vicinity of the proposed source or modification.

In accordance with the "Ambient Monitoring Guidelines for Prevention of Significant Deterioration", EPA-450/4-87-007, existing monitoring data can be used to meet this requirement. The existing monitoring data should be representative of three types of areas: (l) the location(s) of maximum concentration increase from the proposed source or modification, (2) the location(s) of the maximum air pollutant concentration from existing sources, and (3) the location(s) of the maximum impact area, i.e., where the maximum pollutant concentration would hypothetically occur based on the combined effect of existing sources and the proposed new source or modification.

The locations and size of the three types of areas are determined through the application of air quality models. The areas of maximum concentration or maximum combined impact vary in size and are influenced by factors such as the size and relative distribution of ground level and elevated sources, the averaging times of concern, and the distances between impact areas and contributing sources. In situations where there is no existing monitor in the modeled areas, monitors located outside these three types of areas may be used. Each determination must be made on a case-by-case basis. The EPA guidance on this issue is not designed for the evaluation of a secondary pollutant like ozone and the guidance document clearly discusses the evaluation

of the impact of primary pollutants. However, a demonstration that existing monitoring data for ozone is representative of the three areas listed above can be made.

The facility is located in downtown Oklahoma City and within 10-km of the OKC Central monitor (ID 401090033-44201-1) located on Northeast 10th and Stonewall. This monitor has been in place collecting data since 1974. The facility is further surrounded by an additional five monitors, all located within 20-km of the facility. These monitors capture the area of maximum impact from the facility and existing sources. The network is designed to be representative of both population exposure and the maximum ozone concentrations for the metropolitan area.

The current design value, the three year average of the 4th highest 8-hour concentrations for the period of 2005 through 2007, for the nearest monitor is 0.077 ppm. The design values for surrounding monitors do not exceed 0.080 ppm and Oklahoma City is currently classified as in attainment with the 8-hour ozone standard.

Additional Impacts Analysis

1. Growth Impacts

Producers does not expect to add new permanent jobs to the mill as a result of this project. Accordingly, no new growth is anticipated as a result of this project.

2. Soil and Vegetation Analysis

Elevated ground-level ozone concentrations can damage plant life and reduce crop production. As previously discussed, the proposed VOC emission increases will not have a significant effect on the ambient ozone level. Since Producers only emits small levels of NOx from the boilers and comfort-heating, it is reasonable to conclude that the facility will not be a primary contributor to ozone formation and therefore will not adversely affect vegetation on the surrounding area.

Documentation of any direct effects of ozone on soils was not found during literature searches. The proposed project will not alter the pH balance of the soils in the area. Therefore, it is concluded that the increased VOC emissions will produce no adverse affect on soils in the surrounding area.

3. Visibility Impact Analysis

The project is not expected to produce any perceptible visibility impacts in the vicinity of the plant. It is concluded that there will be minimal impairment of visibility resulting from the facility's emissions. Given the limitation of 20% opacity of emissions, and a reasonable expectation that normal operation will result in 0% opacity, no local visibility impairment is anticipated.

4. Class I Area Impact Analysis

A further requirement of PSD includes the special protection of air quality and air quality related values (AQRV) at potentially affected nearby Class I areas. Assessment of the potential impact to visibility (regional haze analysis) is required if the source is located within 100 km of a Class I area. An evaluation may be requested if the source is within 200 km of a Class I area.

The closest Class I Area to the Producers facility is the Wichita Mountain Wildlife Refuge, which is located approximately 114 kilometers (km) southwest of the facility.

Class I Area analyses examine two separate items: Class I Increments and Air Quality Related Values (AQRVs). Class I Areas have a separate set of PSD increments for PM10, SO2, and NOx that are more stringent than the typically considered Class II Increments. The proposed project does not result in a significant emissions increase of PM10, SO2, CO, and NOx. Therefore, a Class I Increment modeling analysis is not warranted. AQRVs include visibility, regional haze, and the deposition of nitrates and sulfates in soil and surface waters. VOC is not considered a visibility impairing pollutant. Therefore, the proposed project is not expected to significantly impact any AQRVs in the Wichita Mountain Wildlife Refuge.

SECTION VI. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Appropriate recordkeeping of activities indicated below with a "*" is specified in the Specific Conditions.

1. *Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, average over a 30-day period. There are one 300-gallon and one 600-gallon diesel tanks, and one 300-gallon and one 600-gallon gasoline tank located on-site. However, the facility does not own or operate these tanks.

2. Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas). There is one natural gas fired heater.

3. Cold degreasing operations utilizing solvents that are denser than air. Cold degreasing occurs in the maintenance shop.

4. * Welding and soldering operations utilizing less than 100 pounds of solder and 53 tons per year of electrodes. Some operations are conducted at the facility.

5. *Torch cutting and welding of under 200,000 tons of steel fabricated. Torch cutting are conducted at the facility.

6. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas. The facility performs small amounts of hand wiping and spraying of solvents.

7. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. There are six cottonseed oil tanks.

SECTION VII. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This Subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in "attainment" of these standards.

OAC 252:100-5 (Registration, Emission Inventory, and Annual Operating Fees) [Applicable]
The owner or operator of any facility that is a source of air emissions shall submit a complete emission inventory annually on forms obtained from the Air Quality Division. An emission inventory was submitted and fees paid for previous years as required.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for single HAP that the EPA may establish by rule

Emission limits for the facility are based on information in the permit application.

OAC 252:100-9 (Excess Emission Reporting Requirements) [Applicable]
In the event of any release which results in excess emissions, the owner or operator of such facility shall notify the Air Quality Division as soon as the owner or operator of the facility has knowledge of such emissions, but no later than 4:30 p.m. the next working day. Within ten (10) working days after the immediate notice is given, the owner operator shall submit a written report describing the extent of the excess emissions and response actions taken by the facility. Part

70/Title V sources must report any exceedance that poses an imminent and substantial danger to public health, safety, or the environment as soon as is practicable. Under no circumstances shall notification be more than 24 hours after the exceedance.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.
OAC 252:100-19 (Particulate Matter) [Applicable]
This subchapter specifies maximum allowable emissions of particulate matter (PM). AP-42 (7/98), Table 1.4-2, lists the total PM emissions for natural gas fired boilers to be 7.6 $lb/10^6$ scf which is equivalent to 0.0076 lb/MMBTU. The larger boiler at the facility is rated 29.4 MMBTU/hr. According to 252:100-19-4, the allowable emissions rate is 0.48 lb/MMBTU. Therefore, the natural gas fired boilers comply with this subchapter.

This subchapter also limits emissions of particulate matter from any industrial process based upon the process weight rates. The emission rate in pounds per hour (E) is not to exceed the rate calculated using the process weight rate in tons per hour (P), for process rates up to 60,000 lb/hr the formula in Appendix G is ($E = 4.10*P^{(0.67)}$) and for process rate in excess of 60,000 lb/hr the formula in Appendix G is ($E = 55.0P^{0.11}-40$). Listed below are the estimated process weight rates and calculated potential to emit. All emissions are in compliance with the emission limits.

Process	**Process Weight Rate (tons/hr)**	**Allowable Emission Rate (lb/hr)**	**Calculated Emission Rate (lb/hr)**
Cleaning Room Cyclone	41.67	42.90	19.53
Lint Room Cyclones and Drum Filters	41.67	42.90	18.46
Separations Room Drum filter	41.67	42.90	5.37
Cracking/Dehulling	33.33	40.87	12
Extraction Plant DT/DC Cyclone	22.39	32.91	2.87
Receiving Operations	257.6	61.29	34.1
Seed Storage	41.67	42.90	1.70
Loadout Operations	250.0	60.96	7.25
Meal Clay Tank Bag House	25.00	38.37	0.34

The facility uses cyclones and drum filters to control emissions from various processes. The permit will require proper operation and maintenance of the equipment to ensure compliance with this subchapter.

OAC 252:100-25 (Visible Emissions and Particulates) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Since this facility only burns natural gas, compliance with the standards is assured and no specific monitoring is required.

OAC 252:100-29 (Fugitive Dust) [Applicable]
No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. The permit requires that the facility take reasonable precautions to minimize fugitive emissions from all activities. These precautions include the installation of partially covered and/or enclosed conveyors and transfer points in the material handling system, the use of hoods and tarps in other material handling operations, the proper maintenance and operation of loading equipment, and the periodic cleaning of paved surfaces.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/million BTU heat input, maximum 3-hr average. AP-42 (7/98), Table 1.4-2, lists the total SO_2 emissions for natural gas to be 0.6 lb/MMft^3 or about 0.0006 lb/MMBTU which is in compliance with Subchapter 31. The permit will require the use of commercial-grade natural gas for all fuel-burning equipment to ensure compliance with Subchapter 31.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]
This subchapter addresses new fuel-burning equipment of 50 MMBTUH heat input or greater. The largest fuel-burning equipment in this facility has a maximum rated heat input of 29.4 MMBTUH.

OAC 252:100-37 (Volatile Organic Compounds) [Applicable]
Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. Hexane tank is subject to this requirement. The emissions from the hexane tank are vented to the process stream, which includes a vapor recovery system. Therefore, the facility is in compliance with this subchapter.
Part 3 requires loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. The facility has gasoline loading but it is only used to fill vehicles with tanks less than 200 gallons.
Part 5 limits the VOC content of coatings used in coating lines or operations. Any painting operation will involve maintenance coatings of buildings and equipment and emit less than 100 pounds per day of VOCs and so is exempt.
Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.
Part 7 requires effluent water separators which receive water containing more than 200 gallons per day of any VOC to be equipped vapor control devices. There is a water effluent separator at this location but it does not receive water containing more than 200 gallons per day of any VOC.
Part 7 also requires all reciprocating pumps and compressors handling VOCs to be equipped with packing glands that are properly installed and maintained in good working order and rotating pumps and compressors handling VOCs to be equipped with mechanical seals. There are no pump and compressor on-site.

OAC 252:100-39 (Nonattainment Areas and Former Nonattainment Areas) [Applicable]
Part 7 requires all storage tanks with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a submerged fill pipe or be bottom filled. All displaced vapors from tanks with an average daily throughput of 30,000 gallons are required to be processed by a vapor collection system. The hexane tank is subject to this requirement and complies with this subchapter.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Not Applicable]
This Subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained unless a modification is approved by the Director. Since no AOC has been designated anywhere in the state, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Quality Rules are not applicable to this facility:

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Facilities	not in source category
OAC 252:100-33	Nitrogen Dioxides	not in source category
OAC 252:100-35	Carbon Monoxide	not type of emission unit
OAC 252:100-47	Municipal Solid Waste Landfills	not in area category

SECTION VIII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Applicable]
PSD review has been addressed in previous sections.

NSPS, 40 CFR Part 60 [Subpart Dc Applicable]
Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Dc regulates steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBTU per hour or less, but greater than or equal to 10 MMBTU per hour. The Cleaver Brooks boiler is subject to this subpart and shall comply with all applicable requirements. The ABCO-Scotch boiler was constructed in 1979 and installed in 1985, and is not subject to this subpart.
Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813 gallons capacity and built after July 23, 1984. The hexane tank has a storage capacity of 19,700 gallons and is less than the threshold of 19,813 gallons, thus is not subject to this subpart.

NESHAP, 40 CFR Part 61 [Not Applicable]
There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, benzene, coke oven emissions, mercury, radionuclides or vinyl chloride except for trace amounts of benzene. Subpart J, Equipment Leaks of Benzene only affects process streams that contain more than 10% benzene by weight. All process streams at this facility are below this threshold.

NESHAP, 40 CFR Part 63 [Subpart GGGG is Applicable]
Subpart GGGG, National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production. The facility is a major source of HAP emissions. Therefore, it is subject to this subpart. The facility was constructed before May 26, 2000 and therefore is an existing source. This proposed project will involve a physical replacement of the desolventizer-toaster and the dryer-cooler. Per 63.2833(c)(1), replacing desolventizer-toasters and meal dryer-coolers is a significant modification of a source not a reconstruction of a source. Therefore, according to Table 1 to 63.2833, the source remains an existing source. The allowable solvent loss factors are listed in the following table. The compliance date for the facility was April 12, 2004. The facility shall comply with all applicable requirements.

Oil Seeds	**Hexane Usage**
	gal/ton seeds
Cotton Seed	0.5
Canola	0.7
Sunflower	0.4
Peanut	1.2
Soybean	0.2
Corn Germ	0.7

Subpart DDDDD, Industrial Boilers and Process Heaters. Subpart DDDDD regulated HAP emissions from industrial boilers and process heaters. In March, 2007, the EPA filed a motion to

vacate and remand this rule back to the agency. The rule was vacated by court order, subject to appeal, on June 8, 2007. No appeals were made and the rule was vacated on July 30, 2007.

EPA is planning on issuing guidance (or a rule) on what actions applicants and permitting authorities should take regarding MACT determinations under either Section112(g) or Section 112(j) for sources that were affected sources under Subpart DDDDD and other vacated MACTs. It is expected that the guidance (or rule) will establish a new timeline for submission of section 112(j) applications for vacated MACT standards. At this time, AQD has determined that a 112(j) determination is not needed for sources potentially subject to a vacated MACT, including Subpart DDDDD. This permit may be reopened to address Section 112(j) when necessary.

CAM, 40 CFR Part 64 [Not Applicable At This Time]
Compliance Assurance Monitoring (CAM), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source, that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY

The facility is subject to 40 CFR Part 63 Subpart GGGG which was promulgated on April 12. 2001. Subpart GGGG regulates hexane emissions. The extraction Plant is exempt from CAM according to 40 CFR 64.2(b). PM emissions from each seed process unit is less than 100 TPY after control. CAM is delayed until renewal of the operating permit.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
A Risk Management Plan was submitted in June 2004. More information on this federal program is available on the web page: *www.epa.gov/ceppo*.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart A and F Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).
Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by

January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
This facility does not produce, consume, recycle, import, or export any controlled substances or controlled products as defined in this part, nor does this facility perform service on motor (fleet) vehicles that involves ozone-depleting substances. Therefore, as currently operated, this facility is not subject to these requirements. To the extent that the facility has air-conditioning units that apply, the permit requires compliance with Part 82.

SECTION IX. COMPLIANCE

Tier Classification and Public Review
This application has been determined to be a Tier II per OAC 252:4-7-32 based on the request for a PSD construction permit for a significant modification at an existing major facility.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the real property.

The applicant publish a "Notice of Filing a Tier II Application" in *The Journal Record*, a daily newspaper of general circulation in Oklahoma County, on March 17, 2008. The notice stated that the application may be reviewed at 6 SE 4th Street, Oklahoma City, Oklahoma or at the Air Quality Division's main office. The applicant also published a "Notice of Draft Tier II Permit" in *The Journal Record* on April 9, 2008 to start public review for a period of 30 days. The notice stated that the application and the draft permit were available for public review at 6 SE 4th Street, Oklahoma City, Oklahoma. In addition, a copy of the draft permit was available at the AQD office in Oklahoma City, and on the Air Quality section of the DEQ web page at *www.deq.state.ok.us*. A concurrent EPA review started on February 26, 2008 and ended on May 9, 2008. No comments were received from the public or from the EPA. This site is not within 50 miles of another states border.

Fees Paid
Significant modification of Part 70 permit application fee of $1500.

SECTION IX. SUMMARY

The applicant has demonstrated the ability to comply with applicable state and federal ambient air quality standards and air pollution control rules and regulations. Ambient air quality standards are not threatened at this site. The are no active compliance or enforcement Air Quality issues concerning this facility. Issuance of the permit is recommended.

PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Producers Cooperative Oil Mill **Permit Number 98-167-C (M-4) PSD**

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on September 20, 2007. The Evaluation Memorandum dated May 9, 2008 explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating permit limitations or permit requirements. Commencing construction and operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)]

EUG 1. Cleaning Room Cyclones

EU ID#	**Name/Model**	**Installed Date**
CR01	Lint Fan Cyclone	6/10/94
CR02	Interoll 10 Cyclone	8/15/91
CR03	Interoll 9 Cyclone	8/15/91
CR04A	Interoll 8 Cyclone	9/22/86
CR04B	Interoll 8 Cyclone	9/22/86
CR05A	Interoll 7 Cyclone	9/22/86
CR05B	Interoll 7 Cyclone	9/22/86
CR06A	Interoll 6 Cyclone	9/22/86
CR06B	Interoll 6 Cyclone	9/22/86
CR07A	Interoll 5 Cyclone	9/22/86
CR07B	Interoll 5 Cyclone	9/22/86
CR08A	Interoll 4 Cyclone	9/22/86
CR08B	Interoll 4Cyclone	9/22/86
CR09A	Interoll 3 Cyclone	9/22/86
CR09B	Interoll 3 Cyclone	9/22/86
CR10A	Interoll 2 Cyclone	9/22/86
CR10B	Interoll 2 Cyclone	9/22/86
CR11	Interoll 1 Cyclone	8/15/91
CR12	Seed & Rock Fan Cyclone	6/10/94
CR13	Robbing Fan Cyclone	6/10/94
CR14	Fly lint Fan Cyclone	6/10/94
CR15	Motes Fan Cyclone	6/10/94
CR16	Grabbots Fan Cyclone	6/10/94
CR17	Trash Fan Cyclone	6/10/94

EUG 2. Lint Room Cyclones

EU ID#	Name/Model	Installation Date
LR04	Lint Fan Cyclone	6/10/94
LR05	Lites Fan Cyclone	6/10/94
LR06	Trash Blower Cyclone	6/10/94

EUG 3. Lint Room Drum Filters

EU ID#	Name/Model	Installation Date
LR01	Lint Room Filter #1	1/1/90
LR02	Lint Room Filter #2	1/1/90
LR03	Lint Room Filter #3	1/1/90

EUG 4. Separation Room Filter

EU ID#	Name/Model	Installation Date
SR01	Separation Room Drum Filter	7/1/94

EUG 5. Preparation Room Vents

EU ID#	Name/Model	Installation Date
Prep Room Vents	Shaker	To Be Determined
	Cracking Mill	To Be Determined

EUG 6. Extraction Plant

EU ID#	Name/Model	Installation Date
EP03	Extraction Plant Floor Sweep	1/1/68
EP04	Scrubber Exhaust Vent	6/1/96
EP05	Meal/Dryer/Cooler Cyclone	6/1/96

EUG 8. Seed House Cooling Fans
There are twenty six fans.

EUG 9. Boilers

EU ID#	Make/Model	MMBtu/hr	Serial #	Installed Date
Boiler01	Cleaver Brooks Boiler	29.4	Ol094289	7/1/2001
Boiler02	ABCO-Scotch Boiler	25.20	79124-600	10/1/85

EUG 10. Receiving Operations
This emission group emits fugitive emissions and will not have specific limits on emissions.

EUG 11. Seed Storage
This emission group emits fugitive emissions and will not have specific limits on emissions.

EUG 12. Loadout Operations
This emission group emits fugitive emissions and will not have specific limits on emissions.

EUG 13. Hexane Storage tank (19,700 gallons)
The emissions from the hexane tank are vented to the process stream, which includes a vapor recovery system.

EUG 14. Meal Clay Tank Bag House
This emission point is limited to 25 tons per hour of Magnesium-Mica loading and operating 1 hour per day. There is no specific limit on emissions, since emissions are less than 5 TPY and qualifies as an insignificant activity.

Emission Limitations

Source	PM_{10}		VOC*		NO_x		CO		SO_2	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Cleaning Room Cyclones	19.53	79.1								
Lint Room Cyclones	1.70	6.8								
Lint Room Drum Filters	16.76	67.5								
Separation Room Filter	5.37	21.6								
Cracking/Dehulling	12	54								
Extraction Plant	2.87	11.6	112.0	336.0						
Seed House Cooling Fans	1.56	7.8								
Boilers	0.41	1.82	0.30	1.32	5.46	23.91	4.59	20.09	0.03	0.14

Emission Limitation for Hexane:

Oil Seeds	Hexane Usage
	gal/ton seeds
Cotton Seed	0.4
Canola	0.7
Sunflower	0.4
Peanut	1.2
Soybean	0.15
Corn Germ	0.7

2. The permittee shall keep a daily record on hexane usage and makeup and daily oil production and calculate the daily hexane loss (gal/ton seed). The compliance with the hexane emission limitation (gal/ton) is determined by monthly average. [OAC 252:100-8-6 (a)(3)(B)]

3. The fuel-burning equipment shall be fired with pipeline grade natural gas or other gaseous fuel with a sulfur content less than 343 ppmv, except for the emergency generators which shall be fueled with diesel fuel with a sulfur content of less than 0.25% by weight. Compliance can be shown by the following methods: for pipeline grade natural gas, a current gas company bill; for other gaseous fuel, a current lab analysis, stain-tube analysis, gas contract, tariff sheet, and other approved methods. Compliance shall be demonstrated at least once annually.
[OAC 252:100-8-6(a)]

4. Each boiler at the facility shall have a permanent identification plate attached which shows the make, model number, and serial number. [OAC 252:100-8-6(a)]

5. Total process rate of cotton seed shall be no greater than 1,200 tons per day and 300,000 tons per year. Total process rate of other oil seeds shall be no greater than 800 tons per day and 96,000 tons per year. None of the other oil seeds shall be process simultaneously with cottonseed or each other. [OAC 252:100-8-6(a)]

6. The permittee shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)]

7. The permittee shall be required to maintain the cyclones, the drum filter systems, the Desolventizer-Toaster, the Dryer-Cooler, the cooling fans, and the meal clay tank bag house in good working order. Alternate devices may be used in place of these systems, upon approval of Air Quality, provided that the efficiencies of particulate removal are not less than those of the above listed equipment. [OAC 252:100-8-6(a)]

8. The permittee shall conduct monthly visual observations of the opacity from the exhausts associated with cyclones, drum filters, and the preparation room vents and keep a record of these observations. If visible emissions are detected, then the permittee shall conduct a thirty-minute opacity reading in accordance with EPA Reference Method No. 9. [OAC 252:100-25-3]

9. Visible fugitive dust from the facility shall not be discharged beyond the property line in such a manner as to damage or interfere with the use of adjacent properties, or cause ambient air quality standards to be exceeded, or to interfere with the maintenance of air quality standards. [OAC 252:100-8-6(a)]

10. Reasonable precautions shall be taken to minimize fugitive dust emissions from all activities. The precautions shall include, but not be limited to: [OAC 252:100-29-3]

a. Use of water or chemicals on roads, stockpiles, material processing and all transfer operations where possible.
b. Apply coatings or coverings to substances susceptible to becoming air-borne or wind-borne.
c. Cover or wet materials in trucks.
d. Plant and maintain vegetation coverings or windbreaks.
e. Locate stockpiles so as to provide minimum exposure to high winds and avoid open spaces near neighboring homes and businesses.
f. The proper maintenance and operation of loading equipment.

11. The facility is subject to 40 CFR Part 63 Subpart GGGG and shall comply with all applicable requirements. [40 CFR Part 63 Subpart GGGG]

Emission Standards

The emission requirements limit the number of gallons of HAP lost per ton of listed oilseeds process. For each operating month, the permittee must calculate a compliance ratio which compares the actual HAP loss to the allowable HAP loss for the previous 12 operating months. The oilseed solvent loss factors for determining allowable HAP loss are listed in the following table. If the compliance ratio is less than or equal to 1.0, then the source was in compliance for the previous operating month. [§63.2840]

Oil Seeds	**Hexane Usage**
	gal/ton seeds
Cotton Seed	0.5
Canola	0.7
Sunflower	0.4
Peanut	1.2
Soybean	0.2
Corn Germ	0.7

Compliance Requirements

a. General requirements [§63.2850 (a)]

(1) Submit the necessary notifications in accordance with 63.2860.
(2) Develop and implement a plan for demonstrating compliance in accordance with 63.251.
(3) Develop a written startup, shutdown, and malfunction (SSM) plan in accordance with the provisions in 63.2852.
(4) Maintain all the necessary records used to demonstrate compliance with this subpart in accordance with 63.2862.
(5) Submit reports in accordance with 63.2861(a), (c), and (d).

b. Existing sources under normal operation must meet all of the general requirements and Table 1 of this section, and the schedules for demonstrating compliance for existing sources under normal operation in Table 2 of this section. [§63.2850 (b)]

12. The following records shall be maintained on-site or at a local field office to verify insignificant activities. [OAC 252:100-43]

a. For fuel storage/dispensing equipment solely for facility owned vehicles: Purchase Records (gallons/day averaged over a 30-day period).
b. For welding and soldering operation utilizing less than 100 pounds of solder and 53 tons per year of electrodes: Amount of solder and electrodes used (annual total).
c. For torch cutting and welding of under 200,000 tons of steel fabricated: Amount of steel fabricated (annual total).
d. For activities that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: Type of activity and the amount of emissions from that activity (cumulative annual).

13. The permittee shall maintain the following records of operations. These records shall be maintained on-site or at a local field office at least five years after the date of recording and shall be provided to regulatory personnel upon request.

a. Oil seeds throughput in tons (daily, monthly and 12 month rolling total).
b. Maintenance and inspection of the cyclones, drum filters, the Desolventizer-Toaster, Dryer-Cooler unit, mineral oil scrubber, and the meal clay tank bag house (monthly).
c. Visible observations from exhausts associated with cyclones and drum filters as stated in Specific Condition No. 8.
d. Hexane emissions for oil seeds (gal/ton and tons/12-month).
e. Records required by 40 CFR Part 63 Subpart GGGG.
f. Records by 40 CFR Part 60.116(b).
g. Records of precautions for fugitive dust control plan.
h. Records required by 40 CFR Part 60 Subpart Dc.
i. For fuel(s) burned, the appropriate document(s) as described in Specific Condition No. 3.

14. No later than 30 days after each anniversary date of the issuance of the original Title V permit (8/6/2001), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

15. The Cleaver Brooks boiler is subject to NSPS Subpart Dc and shall record and maintain records of the amount of natural gas combusted each day. [40 CFR 60.48c(g)]

16. Compliance with emission limitations by EUG 5 and EUG 6 shall be demonstrated by performance tests by the permittee using the following test methods specified in 40 CFR 60 within 180 days of start-up. The permittee shall furnish a written report to Air Quality. Performance testing shall be conducted while the unit is operated within 10% of the rate at which operating permit authorization is sought, unless the permittee can sufficiently demonstrate, at the time of testing, that the facility can not operate at 90% capacity rate, then a least of 80% capacity rate will be accepted. The following USEPA methods shall be used for testing of emissions, unless otherwise approved by Air Quality: OAC 252:100-8-6(a)]

Method 1: Sample and Velocity Traverses for Stationary Sources.
Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate.
Method 3: Gas Analysis for Carbon Dioxide, Excess Air, and Dry Molecular Weight.
Method 4: Determination of Moisture in Stack Gases.
Method 5: Determination of Particulate Emissions From Stationary Sources.
Method 18 or 25A: Determination of Volatile Organic Compounds Emissions From Stationary Sources.
Method 201/201A: Determination of PM_{10} Emissions
Method 202: Determination of condensable particulate emissions

17. For this modification, the permittee shall document and maintain a record of the information required by OAC 252:100-8-36.2(c)(1)(A) through (C). The permittee shall monitor the emissions of any regulated NSR pollutant that could increase as a result of this modification and that is emitted by any emissions unit identified; and calculate and maintain a record of the annual emissions, in TPY on a calendar year basis, for a period of 5 years following resumption of regular operations after the modification, or for a period of 10 years following resumption of regular operations after the modification if it increases the design capacity of the affected emissions unit. The permittee shall submit a report to the Director if the annual emissions, in TPY, from the modification, exceed the baseline actual emissions (as documented and maintained by an amount that is significant for that regulated NSR pollutant, and if such emissions differ from the preconstruction projection. The report shall be submitted to the AQD within 60 days after the end of the in which the exceedance or difference occurred. The report shall contain the information required by OAC 252:100-8-36.2(c)(5)(A) through (C). If the permittee materially fails to comply with these provisions, then the calendar year emissions are presumed to equal the source's potential to emit. [OAC 252:100-8-36.2(c)]

18. The permittee shall update the Title V operating permit renewal application within 180 days of commencement of operations.

Producers Cooperative Oil Mill
Attn: Ms. Becky Mosshammer
6 S.E. 4th St.,
Oklahoma City, OK 73129-1000

Permit Number:98-167-C (M-4) PSD
Permit Writer: Jian Yue

SUBJECT: Facility: Producers Cooperative Oil Mill
Location: Oklahoma City

Dear Ms. Mosshammer:

Enclosed is the permit authorizing construction of the referenced facility. Please note that this permit is issued subject to the certain standards and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emissions inventory for this facility. An emissions inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emissions Inventory Staff at 405-702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact the permit writer at (405) 702-4100.

Sincerely,

Jian Yue, P.E.
Engineering Section
AIR QUALITY DIVISION

Enclosures

Producers Cooperative Oil Mill
Attn: Ms. Becky Mosshammer
6 S.E. 4th St.,
Oklahoma City, OK 73129-1000

Permit Number:98-167-C (M-4) PSD
Permit Writer: Jian Yue

SUBJECT: Facility: Producers Cooperative Oil Mill
Location: Oklahoma City

Dear Ms. Mosshammer:

Air Quality Division has completed the initial review of your permit application referenced above. This application has been determined to be a **Tier II**. In accordance with 27A O.S. § 2-14-301 & 302 and OAC 252:4-7-13(c) the application and enclosed draft permit are now ready for public review. The requirements for public review include the following steps which you must accomplish:

1. Publish a combined "Notice of Tier II Permit Application Filing" and "Notice of Tier II Draft Permit" in at least one newspaper of general circulation within the county where the facility is located. (Instructions enclosed)
2. Provide for public review (for a period of 30 days following the date of the newspaper announcement) a copy of this draft permit and a copy of the application at a convenient location (preferably a public location) within the county of the facility.
3. Send to AQD a copy of the proof of publication notice from Item #1 above together with any additional comments or requested changes which you may have on the draft permit.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me at (405) 702-4100 or the permit writer, Jian Yue, at (405) 702-4205.

Sincerely,

Phillip Fielder, P.E., Permits and Engineering Group Manager
AIR QUALITY DIVISION
Enclosures

PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 NORTH ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 98-167-C (M-4) PSD

Producers Coop Oil Mill

having complied with the requirements of the law, is hereby granted permission to construct within the boundaries of the oil mill located at 6 S.E. 4th Street, Oklahoma City, Oklahoma, subject to standard conditions dated January 24, 2008 and specific conditions, both attached.

This permit shall expire 18 months from the issuance date, except as Authorized under Section VIII of the Standard Conditions.

Director, Air Quality Division **Date**